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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/903,260	07/11/2001	Tito Viswanathan	KSC-12191	9447

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EXAMINER
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KOPEC, MARK T

ART UNIT	PAPER NUMBER
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1751

DATE MAILED: 03/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/903,260	VISWANATHAN, TITO	
	<b>Examiner</b>	<b>Art Unit</b>	
	Mark Kopec	1751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-73 is/are pending in the application.
- 4a) Of the above claim(s) 18-54 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17, 55-73 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. ____   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____  | 6) <input type="checkbox"/> Other: ____                                     |

Art Unit: 1751

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-17 and 55-73, drawn to an article of manufacture (corrosion resistance metal substrate) and method of protecting a substrate, classified in class 427, subclass 458.
- II. Claims 18-54, drawn to a latex composition, classified in class 252, subclass 500.

The inventions are distinct, each from the other because of the following reasons:

Inventions of Group II and Group I are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful as a coating for polymeric substrates (antistatic) or as a molding material and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be

Art Unit: 1751

obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter and their different classification, and because the searches required for these distinct groups are not coextensive, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. Randall Heald on 3/10/04 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-17 and 55-73. Affirmation of this election must be made by applicant in replying to this Office action. Claims 18-54 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the

Art Unit: 1751

specification but must be submitted in a separate paper."

Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for

Art Unit: 1751

establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Applicant's claim for domestic priority under 35

U.S.C. 119(e) is acknowledged. However, the provisional application upon which priority is claimed fails to provide adequate support under 35 U.S.C. 112 for claims 1-17 and 55-73 of this application.

Under 35 U.S.C. 119(e), the written description and drawing(s) (if any) of the provisional application must adequately support and enable the subject matter claimed in the nonprovisional application that claims the benefit of the provisional application. In *New Railhead Mfg., L.L.C. v. Vermeer Mfg. Co.*, 298 F.3d 1290, 1294, 63 USPQ2d 1843, 1846 (Fed. Cir. 2002), the court held that for a nonprovisonal application to be afforded the priority date of the provisional application, "the specification of the provisional must contain a written description of the invention and the manner and process of making and using it, in such full, clear, concise,

Art Unit: 1751

and exact terms,' 35 U.S.C. § 112 ¶1, to enable an ordinarily skilled artisan to practice the invention claimed in the nonprovisional application." A claim is not required in a provisional application. However, for a claim in a later filed nonprovisional application to be entitled to the benefit of the filing date of the provisional application, the written description and drawing(s) (if any) of the provisional application must adequately support and enable the subject matter of the claim in the later filed nonprovisional application. If a claim in the nonprovisional application is not adequately supported by the written description and drawing(s) (if any) of the provisional application (as in New Railhead), that claim in the nonprovisional application is not entitled to the benefit of the filing date of the provisional application. If the filing date of the earlier provisional application is necessary, for example, in the case of an interference or to overcome a reference, care must be taken to ensure that the disclosure filed as the provisional application adequately provides (1) a written description of the subject matter of the claim(s) at issue in the later filed nonprovisional application, and (2) an enabling disclosure to permit one of ordinary skill in the art to make and use the

Art Unit: 1751

claimed invention in the later filed nonprovisional application without undue experimentation.

While 60/217,493 discloses corrosion protection of metal substrate with lingo-polyaniline or tannin-polyamine complex, the 60-series does not provide support for the broadly claimed "linearly-conjugated  $\pi$  systems" or "sulfonated polyflavonoid" terminology. The test for sufficiency of support in a parent application is whether the disclosure of the application relied upon "reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter."

Ralston Purina Co. v. Far-Mar-Co., Inc., 772 F.2d 1570, 1575, 227 USPQ 177, 179 (Fed. Cir. 1985) (quoting In re Kaslow, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983)).

Whenever the issue arises, the fundamental factual inquiry is whether the specification conveys with reasonable clarity to those skilled in the art that, as of the filing date sought, applicant was in possession of the invention as now claimed.

See, e.g., Vas-Cath, Inc. v. Mahurkar, 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1117 (Fed. Cir. 1991). An applicant shows

possession of the claimed invention by describing the claimed invention **with all of its limitations** using such descriptive

means as words, structures, figures, diagrams, and formulas that fully set forth the claimed invention. Lockwood v. American



Art Unit: 1751

Airlines, Inc., 107 F.3d 1565, 1572, 41 USPQ2d 1961, 1966 (Fed. Cir. 1997). The written description requirement for a claimed genus may be satisfied through sufficient description of a representative number of species. A "representative number of species" means that the species which are adequately described are representative of the entire genus. Thus, when there is substantial variation within the genus, one must describe a sufficient variety of species to reflect the variation within the genus.

Claims 1, 3-5, 7, 9-17, 55, 57-60, 62-73 rejected under 35 U.S.C. 102(b)/(a) as being anticipated by Berry et al (Corrosion Prevention of Cold Rolled Steel...).

Berry et al was provided by applicant as part of 60/217,493. The reference is available as prior art "to another".

Berry et al discloses corrosion prevention of cold rolled steel by coating with a polymeric complex of lingo-polyaniline (Abstract; experimental). The reference specifically discloses embodiments within the scope of the above claimed limitations.

The reference is anticipatory.

Claims 1-5, 7-17, 55-60, 62-73 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Samuelson et al (6,569,651).

Art Unit: 1751

Samuelson et al (6,569,651) discloses method is provided for enzymatic polymerization which includes (1) obtaining a reaction mixture including a monomer, a template, and an enzyme. The template can be a micelle, a borate-containing electrolyte, or lignin sulfonate. The polymer-template complex may be conductive, and possesses exceptional electrical and optical stability, water solubility, and processibility, and can be used in applications such as anti-static and anti-corrosive coatings (Abstract; Figure 3, 9). A still further aspect of this invention relates to novel polymer-template complexes including a polymer bound to a template. The novel complexes have a molecular weight ranging from 70 kD to 10,000 kD (e.g., 100 kD to 7,000 kD). The complexes can be electrically conducting and/or water soluble and can act as a charge-transfer complex or an optically active complex. Examples of the novel complexes include polymer-lignin sulfonate (e.g., polyaniline-lignin sulfonate or polyphenol-lignin sulfonate) and polymer-borate-containing polyelectrolyte (e.g., polyaniline-tetrafluoroborate-containing polyelectrolyte or polyphenol-tetramethylborate-containing polyelectrolyte) (Col 2, lines 52-64; claims 2, 8, 19, 25). In another embodiment, lignin sulfonate is used as a template in the novel polymerization reaction, thus resulting in an electrically conducting, water-

Art Unit: 1751

soluble polymer which is doped by lignin sulfonate. See Example 3 below. Lignin is an abundant, non-toxic natural polymer that is becoming increasingly more important due to its versatility in performance. Lignin sulfonate is an inexpensive by-product from pulp processing industries, and has already been used in a wide variety of products based on its dispersing, binding, complexing, and emulsifying properties. Although the exact structure of lignin is not yet known, a generalized chemical formula of a known portion of lignin sulfonate is shown in FIG. 3 (Col 8, lines 60-68; example 3). The reference specifically or inherently meets each of the claimed limitations.

The reference is anticipatory.

In the alternative that any minor modifications are necessary to meet the claimed limitations, such as selection of a particular (metallic) substrate or resin vehicle, such modifications are well within the purview of the skilled artisan.

Claims 1-17 and 55-73 are rejected under 35 U.S.C. 102(3) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Greer et al (6,440,332).

Greer et al (6,440,332) discloses A coating system for ferrous and nonferrous metal substrates that provides cathodic protection from corrosion by coating with inherently conductive

Art Unit: 1751

polymers and sacrificial anodic metal particles. The coating system is formed by a process that includes premixing of the inherently conductive polymer with the anodic metal particles to form a inherently conductive polymer/metal particle complex (Abstract). There is provided a method of preparing a coating system adapted for use on an associated metallic substrate, the coating system including a resin binder, an inherently conductive polymer, metallic particles which are anodic to the metallic substrate, and a curing agent. The method includes the steps of mixing the inherently conductive polymer with the metallic particles to form a blend including an inherently conductive polymer/metal particle complex; providing a resin binder selected from the group consisting of water-borne resin systems and solvent-borne resin systems, providing a curing agent; and, mixing the blend, the resin binder, and the curing agent prior to application to the associated metallic substrate (Col 2, lines 1-11). The reference specifically discloses lignosulfonic acid doped PANI (Col 2, lines 58-59; example 1; Col 11, lines 41-50), as well as the claimed high solids, radiation curable and powder coat systems (Col 5 thru Col 8). The reference specifically or inherently meets each of the claimed limitations.

The reference is anticipatory.

Art Unit: 1751

In the alternative that any minor modifications are necessary to meet the claimed limitations, such as selection of a particular resin vehicle or conductive polymer (i.e. polythiophene, polypyrrole), such modifications are well within the purview of the skilled artisan.

In view of the foregoing, the above claims have failed to patentably distinguish over the applied art.

The remaining references listed on forms 892 and 1449 have been reviewed by the examiner and are considered to be cumulative to or less material than the prior art references relied upon in the rejection above.

Greer et al (6,627,117) is a CIP of U.S. 6,440,332 relied upon above. U.S. 6,231,789 is the parent CIP application of U.S. 6,440,332.


Applicant is reminded that any evidence to be presented in accordance with 37 C.F.R. 1.131 or 1.132 should be submitted before final rejection in order to be considered timely.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Kopec whose telephone number is (571) 272-1319. The examiner can normally be reached on Monday - Friday from 9:30 AM to 6:00 PM.

Art Unit: 1751

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Yogendra Gupta can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Mark Kopec  
Primary Examiner  
Art Unit 1751

MK

March 15, 2004